ENVIRONMENTAL ASSESSMENT

Red Rock Mill Project

DOI-BLM-NV-C010-2010-0005-EA

U.S. Department of the Interior Bureau of Land Management Carson City District Stillwater Field Office 5665 Morgan Mill Road Carson City, NV 89701 775-885-6000



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Serial Number: LLNVC01000 (3809) NVV-85700

Environmental Assessment Red Rock Mill Project

Table of Contents

ENVIRO	NMENTAL ASSESSMENT	3
CHAPTER I	- INTRODUCTION / PURPOSE AND NEED	1
INTRODU	CTION	1
	AND NEED.	
	E PLAN CONFORMANCE STATEMENT	
	NSHIPS TO STATUTES, REGULATIONS, AND OTHER PLANS	
CHAPTER I	I – PROPOSED ACTION AND ALTERNATIVES	2
PROPOSE	D ACTION	2
NO ACTIO	ON ALTERNATIVE	5
CHAPTER I	II – AFFECTED ENVIRONMENT	6
SCOPING	AND ISSUE IDENTIFICATION	6
PROPOSE	D ACTION	6
SUPPLEM	ENTAL AUTHORITIES	6
RESOURC	ES OR USES OTHER THAN SUPPLEMENTAL AUTHORITIES	8
RESOURC	ES PRESENT AND BROUGHT FORWARD FOR ANALYSIS	9
III.A.	Migratory Birds	9
III.B.	Water Quality (Surface/Ground)	9
III.C.	General Wildlife	
III.D.	Recreation	10
III.E.	Socioeconomics	11
III.F.	Soils and Geology	11
III.G.	Special Status Species	12
III.H.	Vegetation	
ALTERNA	ATIVES	13
CHAPTER I	V – ENVIRONMENTAL CONSEQUENCES	14
PROPOSE	D ACTION	14
IV.A.	Migratory Birds	14
IV.B.	Water Quality (Surface/Ground)	
IV.C.	General Wildlife	
IV.D.	Recreation	
IV.E.	Socioeconomics	14
IV.F.	Soils and Geology	15
IV.G.	Special Status Species	
IV.H.	Vegetation	
NO ACTIO	ON ÄLTERNATIVE	16
	L IMPACTS	
CUMULA'	TIVE IMPACTS	16
MONITOR	RING	16
CHAPTER V	V - CONSULTATION AND COORDINATION	17

LIST OF PREPARERS	
PERSONS, GROUPS, OR AGENCIES CONSULTED	
REFERENCES	
LIST OF TABLES	
Table 3-1: Supplemental Authorities	
Table 3-2: Resources or Uses	
Table 3-3: Migratory Birds That May Occur in the Project Area	
Table 3-4: Hydrographic Basin Information	
Table 3-5: Soil Map – Units and Size	
Table 3-6: Soil Map – Ecological Sites	
Appendix A – Figures	
Figure 1 – Vicinity Map	
Figure 2 – Boundary Map	
Figure 3 – Existing Facilities	
Figure 4 – Crushing Effort	
Figure 5 – Gravity Circuit	
Figure 6 – Flotation Circuit	
Figure 7 – Tailings Impoundment Design and Site Plan	
Figure 8 – Hydrogeological and Lithological Information	
Figure 9 – Geological Map	

Appendix B – Agency Letters

CHAPTER I – INTRODUCTION / PURPOSE AND NEED

INTRODUCTION

The Bureau of Land Management (BLM) has initiated this Environmental Assessment (EA) as a result of Proposed Actions on lands administered by the BLM. Infrastructure Materials Corporation (IMC) is proposing reclamation of Red Rock Mill (The Project) to conduct milling activities. The Project is located in SW 1/4 Section 5, Township 6 North, Range 35 East, Mount Diablo Baseline and Meridian (MDB&M) shown in Figure 1.

PURPOSE AND NEED

The purpose of the Proposed Action is the rehabilitation and reclamation of the existing Red Rock Mill for the production of metal ore concentrates. The Project is a physical separation facility owned by and operated by IMC. The mill is located along the prolific Walker Lane lineament, which has seen a recent increase in activity. Rich in mineral producing, the area is estimated to contain over 46.7 million ounces of gold and over 436.0 million ounces of silver in production and resources. IMC is proposing to put the 200-ton per day mill into production on the existing mill site located adjacent to the community of Mina, Nevada, within Mineral County. IMC owns three silver mines in the area that would supply the mill facility. The design of the reclamation of the site took into consideration the use of Best Management Practices (BMPs) to ensure that undue degradation of the environment does not occur. The mill is currently non-operational, so ore from other IMC mines would be used for the proposed operation of the Project. The expected life of Red Rock Mill is five to ten years.

LAND USE PLAN CONFORMANCE STATEMENT

The Proposed Action and alternatives described below are in conformance with the Carson City District Office Consolidated Resource Management Plan. Page LND-7 of the document states "non-Bureau initiated realty proposals would be considered where analysis indicates they are beneficial to the public."

RELATIONSHIPS TO STATUTES, REGULATIONS, AND OTHER PLANS

The EA is per the requirements of the National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) regulations. This EA has been prepared by the BLM to address the potential environmental effects of the Red Rock Mill Project proposed by IMC. The analysis in this EA complies with provisions of NEPA and CEQ. IMC has already submitted a Plan of Operations (POO) and Reclamation Plan to BLM for acceptance of total milling-related disturbance applicable to the project.

CHAPTER II – PROPOSED ACTION AND ALTERNATIVES

PROPOSED ACTION

Infrastructure Materials Corporation is proposing reclamation of Red Rock Mill to conduct milling activities. The Project is located in the area approximately one half mile northeast of the town of Mina, in Mineral County, Nevada (See Figure 1). It is in the Soda Spring Valley, specifically located in SW 1/4 Section 5, Township 6 North, Range 35 East, Mount Diablo Baseline and Meridian (MDB&M). The Red Rock Mill (also known as the Mina Mill, Blackhawk Mill Site, and the Blackhawk/Eureka Consolidated Mill) project site is located on six (6) unpatented mill site claims located on public lands administered by the BLM, Stillwater Field Office, Nevada. The Red Rock Mill Boundary Map is illustrated in Figure 2. The Project is further described in the section below.

IMC would implement Best Management Practices (BMPs) at all times during the construction and rehabilitation of the mill facilities. IMC would use appropriate BMPs contained in the State of Nevada Best Management Practices Handbook (NDEP, 1994).

IMC would be responsible for noxious weed control on disturbed areas within the Project Area (PA). IMC would also be responsible for consultation with the BLM for acceptable noxious weed control methods in the event that noxious weeds are encountered.

Project Description:

History and Existing Activities

Historically, the Red Rock Mill has been a custom milling facility that has operated under various configurations to meet the specific requirements of prior operators. Ore from various local or regional sources was hauled to the mill, custom milled, and processed for the production of doré. Originally a cyanide facility, it has since been converted and is now a flotation gravity circuit.

Several site assessments conducted in the summer of 2007 indicate that the current mill facility was installed between 1981 and 1982. The mill operated on a sporadic basis between 1981 and 1986, at which time a Notice-of-Intent (NOI) was submitted. Additional processing equipment appears to have been installed since that time. IMC would apply for all appropriate federal, state, county, and local permits pertaining to this Proposed Action.

Currently non-operational, the mill is nominally designed to process 200 tons of ore per day. Depending on the ore hardness, the crushing circuit would be able to process up to about 250 tons of ore per day. The flotation and gravity sections are also capable of running at the 200 tons per day rate.

The mill site consists of several buildings: the ore-processing mill with main power generators, a workshop/warehouse complex that includes maintenance facilities, and the project office with the assay lab. The site also includes an ore stockpile area; fuel storage and fueling area; a lay down area; several small portable buildings housing parts, equipment, and supplies; and borrow pit and tailings facility. All existing support buildings would be augmented, and mechanical improvements at the mill site would be

used to accommodate the proposed operation (Figure 3). It is anticipated that operations would commence in late 2010.

Proposed Activities

Current plans call for IMC to process stockpiled ore from its various mines, as well as process ore from various producers on a toll basis. At the IMC mines, ore would be loaded onto dump trucks via front-end loaders and transported over BLM, County, and State roads to the mill site. The trucks would be licensed to travel on the County and State roads. At the mill site, ore would be stockpiled for use as mill feed as required, or until the ore is depleted from the stockpile.

Ore would be hauled from the stockpile to a hopper, which would feed the primary jaw crusher at an average rate of 100 tons per day (tpd) for the first year (Figure 4). The mill would operate 20 hours per day, 312 days per year. Under this schedule, initially the mill would process an estimated 31,000 tons of ore per year. It is anticipated that the mill would process 150 to 200 tons per day the second year of operation. An existing well would be used to provide water for the proposed operation. The expected life of the mill is five to ten years.

Sierra Pacific Power Company supplies electricity to the Red Rock Mill.

Recovery Circuit

Currently, the layout of the Red Rock Mill is estimated to produce 200 ton-per-day (tpd) in a mill setting that could operate in either a gravity concentrating circuit or floatation plant as warranted by the ores to be processed. The circuits are contained in a 4,500 square foot process building. Each circuit is independent and would be used as needed to meet the custom nature of the ore being processed. The gravity circuit would be used in cases of highly oxidized occurrences of gold/silver vein ores with a high degree of coarse gold (Figure 5). The floatation circuit would be used to handle any ores that contain high sulfides (Figure 6).

The concentrates from the floatation processing effort would be collected, bagged, and sold for shipment to a third party source for use in their circuits to promote their recovery efforts. All collected and bagged sulfides would be contained and confined to areas of the mill that would be for all intents and purposes a zero discharge system. The ore processing circuits would utilize water and appropriate flocculants. In either case (floatation/gravity), no cyanide would be used in the collection of precious metal products.

The tailings for the process activities would be delivered to an approximately four (4) acre lined tailings facility (Figure 7 – oversized, located at end of report). The tailings facility is currently in design and would be approved by NDEP. Standard elements of the design would include a compacted base, a Compacted Clay Liner (GCL), High Density Polyethylene (HDPE) liner, ADS drain lines, and a drain cover in the foot-print of the tailings dam. Draining solutions in the tailings material would be collected into a seepage pond and pumped back into the milling facility.

The recovery facility includes feed hoppers with grizzly two (2), three-stage crushing [Kue Ken Jaw (15" x 24"), Allis-Chalmers 36" cone, and Marcy Ball Mill (5' x 6')], scalping screens (3' x 6'), a bank of cyclone classifiers, several 4' by 8' concentrating tables, and various lengths of 36" wide belt conveyers. The floatation side contains a bank of six (6) Denver float cells (42" x 42"), thickener tank (12' x 6'), and five (5) agitation tanks. Both sides of the process circuit would supply the refinery with concentrates. The refinery contains a 3' diameter furnace and two (2) banks of filter presses. A 110 cubic yard coarse ore bin located just outside the process building would feed both sides of the recovery circuit.

Currently, optimization studies are underway that may add or eliminate elements of the current concentration circuit.

Material to be processed on a toll basis would be stockpiled and tested by the Meteoric Water Mobility Procedure to determine the potential to dissolve constituents by meteoric water. Samples of stockpiled materials would also be tested using static Acid Base Accounting (ABA) procedures to determine their potential to generate or neutralize acid.

Existing Tailings

Tailings in the existing ponds are the results of previous milling activities. Samples of the existing tailings were collected, and Meteoric Water Mobility Procedure (MWMP) lab tests were performed to evaluate baseline conditions.

Reclamation of the existing 5.4-acre tailings impoundment area would be completed before development of future tailings impoundment areas.

Proposed Tailings Facility

The proposed tailing facility involves the construction of a series of ring embankment tailing cells located adjacent to the present borrow pit and mill lay-down and would also require the construction of a lined reclaim water return pond.

The proposed tailings impoundment area is projected to ultimately consist of seven (7) new tailings ponds/cells. The dimensions of each would be approximately 80 feet wide by 300 feet long at their crests and approximately 12 feet deep with 2:1 embankment slopes. Initially, only two (2) ponds would be fully developed. The first would be a tailings disposal and settling pond, and the second a reclaimed water pond with reclaimed water pumped back to the mill for reuse. Each fully developed pond would be lined with HDPE liners prior to placement of mill tailings material. As the initial tailings settling pond begins to fill to capacity, a new reclaimed water pond would be built immediately adjacent to the existing reclaimed water pond and lined with HDPE liner. The previous reclaimed water pond would be converted to a second tailings impoundment pond. This sequence of events would be repeated until all seven tailings ponds are filled to capacity with mill tailings. The last 100 feet of the seventh pond would be the final reclaimed water pond and would be left in place as the meteoric water drainage collection and retention point. New ponds would only be constructed and lined according to the observed filling rates of the ponds in use.

Once all seven proposed tailings ponds have been filled to capacity, the final water reclamation pond would be left in place. The ponds then would be graded to a uniform drainage grade to drain the meteoric water collection point and capped with 12" compacted fill being placed in the same manner as in the previously reclaimed tailings facility.

NO ACTION ALTERNATIVE

Under the No Action Alternative, the Proposed Action would not be approved by the BLM. The existing property and habitat would remain the same. None of the actions described above would occur.

CHAPTER III – AFFECTED ENVIRONMENT

This chapter identifies and describes the current condition and trend of elements or resources in the human environment, which may be affected by the Proposed Action or Alternatives.

SCOPING AND ISSUE IDENTIFICATION

No public scoping has been held in regards to this project. However, the BLM interdisciplinary team scoping occurred April 27, 2009, and the following resources were identified for analysis:

Supplemental Authorities:

- Migratory Birds
- Water Quality (Surface/Ground)

Resources or Uses:

- General Wildlife
- Recreation
- Socioeconomics
- Soils and Geology
- Special Status Species
- Vegetation

PROPOSED ACTION

General Setting

The Project is located approximately one half mile northeast of the town of Mina, in Mineral County, Nevada. It is in the Soda Spring Valley, specifically located in SW 1/4 Section 5, Township 6 North, Range 35 East, Mount Diablo Baseline and Meridian (MDB&M). Mina is at an elevation of 4560'. This high desert area location is characterized by warm, dry summers and fairly mild winters. The Red Rock Mill (also known as the Mina Mill, Blackhawk Mill Site, and the Blackhawk/Eureka Consolidated Mill) project site is located on six (6) unpatented mill site claims. They are located on public lands that are administered by the Bureau of Land Management (BLM), Stillwater Field Office, Nevada.

SUPPLEMENTAL AUTHORITIES

Appendix 1 of BLM's NEPA Handbook (H-17901) identifies Supplemental Authorities that are subject to requirements specified by statute or executive order and must be considered in all BLM environmental documents. Supplemental Authorities that may be affected by the Proposed Action are further described in this EA. This section describes the current status of Supplemental Authorities and resources that may be affected by either the Proposed Action or the No Action Alternative. Table 3-1 outlines the Supplemental Authorities that must be addressed in all EA's and whether or not the Proposed Action potentially impacts those elements.

Table 3-1: Supplemental Authorities

Supplemental Authority	Not Present	Present/Not Affected	Present/May Be Affected	Rationale and/or Section Found
Air Quality		X		Mineral County is considered an attainment county, which means the air quality is as good as or better than the national ambient air quality standards as defined in the Clean Air Act. The Proposed Action would not contradict or conflict with Nevada's Division of Air Quality's State Implementation Plan.
Areas of Critical Environmental Concern	X			Resource is not present
Cultural Resources	X			Under the protocol between the NVBLM and the SHPO as amended 2005, Appendix C2, the project area has been previously disturbed to the extent that the historic properties could not exist.
Environmental Justice	X			Resource is not present
Farm Lands (prime or unique)	X			Resource is not present
Floodplains	X			Resource is not present
Invasive, Non- Native Species		X		Based on field observations there are no known infestations of noxious weeds within or adjacent to the proposed Project Area.
Migratory Birds			X	Carried through EA
Native American/ Religious Concerns	X			Correspondence –Notification of the proposed project was provided to the Walker River Paiute Tribe was provided. No concerns were brought forward for this project
Threatened or Endangered Species	X			Resource is not present
Human Health and Safety (Herbicide Projects Only)	N/A			Resource is not present
Forests and Rangelands (HFRA only)	X			Resource is not present
Wastes, Hazardous or Solid	X			Resource is not present

Supplemental Authority	Not Present	Present/Not Affected	Present/May Be Affected	Rationale and/or Section Found
Water Quality (Surface/Ground)			X	Carried through EA
Wetlands/ Riparian Zones	X			Resource is not present
Wild and Scenic Rivers	X			Resource is not present
Wilderness	X			Resource is not present

^{*}Supplemental Authorities determined to be Not Present or Present/Not Affected need not be carried forward or discussed further in the document.

RESOURCES OR USES OTHER THAN SUPPLEMENTAL AUTHORITIES

The following Resources or Uses, which are <u>not</u> Supplemental Authorities as defined by BLM's Handbook H1790-1, are present in the area. BLM specialists have evaluated the potential impact of the Proposed Action on these resources and documented their findings in the table below. Resources or used that may be affected by the Proposed Action are further described in this EA.

Table 3-2: Resources or Uses

Resource or Uses	Present/Not Affected*	Present/ May Be Affected**	Rationale and/or Section Found
Access and Land Use	X		The Proposed Action would not disturb or disrupt existing land uses within the PA, such as roads and utility corridors. When operations are concluded, IMC would remove any survey markers, stakes and flagging.
General Wildlife		X	Carried through EA
Recreation		X	Carried through EA
Socioeconomics		X	Carried through EA
Soils and Geology		X	Carried through EA
Special Status Species		X	Carried through EA
Vegetation		X	Carried through EA
Visual Resources	X		The Proposed Action would have minimal to no impact due to previous development in the area.
Wild Horses and Burros	X		Consultation with BLM indicates that HMA's exist along the surrounding mountain areas, but not in the flat area where the Project is actually located.

^{*}Resources or uses determined to be Present/Not Affected need not to be carried forward or discussed further in the document.

^{**}Supplemental Authorities determined to be Present/May Be Affected <u>must</u> be carried forward in the document.

^{**}Resources or used determined to be Present/May Be Affected must be carried forward or discussed further in the document.

RESOURCES PRESENT AND BROUGHT FORWARD FOR ANALYSIS (All Supplemental and Resources)

The Supplemental Authorities and Resources of the human environment that are not present or not affected are not further considered in the analysis. The description of the potentially affected environment for the No Action Alternative would be contained within the Proposed Action Project Area and would contain elements of the resources described for the Proposed Action.

The following Supplemental Authorities and Resources are present in the area, may be affected by the Proposed Action, and are carried forward for analysis. For consistency, the Supplemental Authorities are listed in the same order as in Table 3-1, followed by Resources or Uses in Table 3-2.

III.A. Migratory Birds

Based on the conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918 (MBTA), potential impacts on migratory birds for the proposed project must be taken into consideration. On January 11, 2001, President Clinton signed Executive order 13186 (Land Bird Strategic Project), placing emphasis on conservation and management of migratory birds. Management for these species is based on Instruction Memorandum – IM 2008-050 dated December 18, 2007. BLM policy states that every migratory bird should be included in analysis of actions that may impact these birds. The list of migratory species of concern that may occur in the Project Area is shown in Table 3-3 below (BLM 2007).

Table 3-3: Migratory Birds That May Occur in the Project Area

Common Name	Scientific Name
Peregrine falcon	Falco peregrinus
Swainson's hawk	Buteo swainsoni

Much of the area currently provides limited wildlife habitat due to the lack of plant community diversity. Due to previous disturbance in the area it is highly likely that bird species already avoid using the area for foraging or reproductive processes. The area is also void of canopy vegetation that would provide protection or shelter.

III.B. Water Quality (Surface/Ground)

Information for this section was obtained from the Nevada Division of Water Resources website http://water.nv.gov and from the National Water Information System website http://waterdata.usgs.gov/nv/nwis/gw. As indicated in Table 3-4, the PA is located within Hydrographic Area Number 121A, named Soda Spring Valley-Eastern Part. This Hydrographic area has been designated as a groundwater basin under the provisions of Chapter 534 NRS (Conservation and Distribution of Underground Waters). Designated groundwater basins are basins where permitted groundwater rights approach or exceed the estimated average annual recharge and the water resources are being depleted or require additional administration. Under such conditions the state water official designates the preferred uses. There is no specific preferred use for Hydrographic Basin

121A, as there are many uses: mining and milling, municipal, irrigation, stock water, commercial, domestic, environmental, quasi-municipal, and other. The annual yield for Basin 121A is estimated at 600 acre-feet of water. Of this annual yield, 1,843.30 have been appropriated for mining and milling, 901.39 for municipal, 361.98 to other, 30.01 to stock water, 23.45 to domestic, 6.44 to environmental, 1.93 to commercial, and 0.21 to quasi-municipal.

Table 3-4: Hydrographic Basin Information

Basin	Area	Size (sq. mi)	Size (acres)	Hydrographic Area/Sub-	County(ies)	Nearest City(ies)	Des.
(1)	(2)	(3)	(4)	Area Name	(5)	3 (3.1)	(6)
10	121A	246	157,440	Soda Springs Valley/Eastern Part	Mineral	Luning, Mina	Yes

⁽¹⁾ Nevada Hydrographic Basin Number (1-14).

There are 11 wells located within or near the PA (Figure 8). Four of these wells are classified as domestic wells and the other seven are USGS wells. Only one well is located within the actual project site, a domestic down-gradient well, with static water reported in July of 1982 as 46'. This well is approximately 4497' above sea level. Source of groundwater at the PA and surrounding area is an alluvial aquifer valley fill. The groundwater level at the project site is approximately at 4430' above seal level. The PA is partially located within a delineated watershed that covers 9,975 acres.

There are no perennial surface water bodies located within a one-mile down gradient vicinity of the PA.

III.C. General Wildlife

General wildlife populations are not naturally diverse in the general PA due to existence of major roadways, residential areas, previous milling disturbance, and naturally barren areas associated with the flat geology of the area. Much of the minimal local fauna has been displaced by previous disturbances.

III.D. Recreation

The Best in the Desert Racing Association holds their Vegas to Reno Race (Race) every year in the summer, typically some time in August. The three-day Race passes through the town of Mina on Day 2, with Pit Stop # 7 actually located in Mina. The same access road used for the Project is used for the Race as well. There would be a higher amount of

⁽²⁾ Nevada Hydrographic Area/Sub-Area Number (1-232; hydrographic sub-areas designated A, B, C, etc.). There are a total of 256 hydrographic areas and sub-areas.

⁽³⁾ and (4) Hydrographic areas and sub-areas in square miles and acres, respectively, and include acreage only contained within Nevada.

⁽⁵⁾ Counties are listed in order of their share of the hydrographic area/sub-area.

⁽⁶⁾ Des = Designated Groundwater Basin (Area or Sub-Area).

^{*}Source Data: Office of the State Engineer, Nevada Division of Water Resources, Department of Conservation and Natural Resources.

traffic on that access road during the days of the Race. However, no impact is expected on the Race, as IMC would be aware of the dates.

III.E. Socioeconomics

All the data presented in this paragraph is the most recent data available from www.nevadaworkforce.com. The US-Nevada Census reported the population of Mineral County to be 4,684 in 2008. Labor force was reported at 2,293 in 2007 and 2,373 in 2008, with an unemployment rate of 6.6% in 2007 and 8.5% in 2008. The median age in Mineral County was 43 in 2000, and the median per capita personal income in 2008 was \$27,863. The annual payroll was \$61,243,494 in 2007, with \$1,952,536 coming from the mining industry.

III.F. Soils and Geology

Soil designation for the Project Area was obtained from the United States Department of Agriculture, Natural Resources Conservation Service website. Soil surveys are for Mineral County Area, Nevada (NV774) and are dated for 2006. Two soil map units are located within the Project Area shown in the Table 3-5.

Table 3-5: Soil Map – Units and Size

Map Unit Symbol	Map Unit Name	Acres in Area of Interest	Percent of Area of Interest
1155	Gynelle-Izo	13.2	73.3%
	association		
1201	Playas-Slaw	4.8	26.7%
	association		
Total for Area of		18.1	100.0%
Interest			

Source: NRCS, 2006

The soil map units form on two geomorphic locations: fan remnants and playas. Fan remnants make up 73.3% of the PA and 26.7% are playa soils. The steepest parts of the PA (fan remnants) have a slope of 4-8% and consist of Gynelle-Izo association. The remaining of the PA is Playas-Slaw association. The soils in the PA are further described by ecological sites (Table 3-6) and susceptibility to wind erosion.

Table 3-6: Soil Map – Ecological Sites

Map Unit Symbol	Component Name (percent)	Ecological Sites	Acres in Area of Interest	Percent of Area of Interest
1155	- Gynelle (50%)	- Coarse Gravelly		
		Loam 3-5 P.Z		
			13.2	73.3%
	- Izo (35%)	- Dry Wash		
1201	- Playas (60%)	- N/A		
			4.8	26.7%
	- Slaw	- Sodic Flat		
Totals			18.1	100%

A wind erodibility group (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to Group 1 are the most susceptible to wind erosion, and those assigned to Group 8 are the least susceptible. WEG for the Project Area is 4 and 4L. Over 73% (Unit 1155) of the PA is in Group 4, and the remainder (Unit 1201) is 4L.

The geology described in this section is based on the Mina Quadrangle area. The PA is located in the Alkali Flat (Oldow and Dockery, 1993). The geology of the project site and the area within a one-mile radius is classified as Desert Wash and Alluvium (Figure 9). This type of geology includes a diversified lithology of playa hard clay and local evaporate deposits of salt, sodium carbonate, and borax. Gravel and boulder veneers are also present on the borders of the playas, carried by flash floods from surrounding mountains (Ferguson et al., 1954). Further surroundings of the Mina area include a thick accumulation of arc-derived volcanogenic turbidite, pelite, and chert from deep-water deposits. Rocks related to the volcanic province in northwestern Nevada are also found in the Mina area. These consist of massive breccia and lava of hornblende and pyroxene basaltic andesite, minor dacite, mafic intrusive rocks, volcanogenic turbidte, massive volcanic conglomerate, and sparse limestone. The age of the geology of Mina is Permian, based on radiometric dating (Stewart, 1980).

III.G. Special Status Species

Federally Listed Species

BLM Manual 6840 – Special Status Species Management, establishes policy for management of species listed or proposed for listing pursuant the Endangered Species Act which are found on BLM-administered lands (BLM 2008). A database and literature search was requested from Nevada Natural Heritage Program (NNHP) and United States Fish and Wildlife Services (USFWS) for any Special Status Species that may occur in the Project Area. The letter received from the NNHP, dated January 27, 2009, (Appendix B) indicates no at-risk taxa recorded, but potential habitat for the Sodaville milkvetch, Astragalus lentiginosus var. sesquimentralis may exist in the PA. The letter received from USFWS, dated February 3, 2009, (Appendix B) states that to the best of their knowledge no listed, proposed, or candidate species occur in the PA.

BLM Sensitive Species

BLM Manual 6840 – Special Status Species Management, establishes policy for management of Bureau sensitive species that are found on BLM-administered lands (BLM 2008). Species designated as Bureau sensitive must be native species found on BLM-administered lands for which BLM has the capability to significantly affect the conservation status of the species through management, and either:

- 1. There is information that a species has recently undergone, is undergoing, or is predicted to undergo a downward trend such that the viability of the species or a distinct population segment of the species is at risk across all or a significant portion of the species range, or
- 2. The species depends on ecological refuge or specialized habitats on BLM-administered lands, and there is evidence that such areas are threatened with alteration such that the continued viability of the species in that area would be at risk.

The PA is fenced off and is a pre-existing exploration and mill site. There is very limited vegetation and habitat for Special Status Species. The whole PA was previously disturbed and therefore has limited resources for good habitat.

III.H. Vegetation

The PA supports limited vegetation. The PA is located ½ a mile from the town of Mina, which indicates the presence of roadways (US Highway 92) and residential areas that have affected the vegetation. The PA is fenced off and is a pre-existing exploration and mill site. Observations indicate the only vegetation present in the PA area consists mainly of thistle weed and tamarisk. Consultation with the USFWS indicates there are no federally listed, proposed, or candidate habitat communities or vegetation species on the project site. Consultation with NNHP indicates the potential habitat available for Sodaville milkvetch, *Astragalus lentiginosus* var. *sesquimentralis*, although none were encountered during field observations. An approved seed mix would be provided by the BLM to establish a plant community that would support the post-reclamation land use.

ALTERNATIVES

The description of the Affected Environmental for the No Action Alternative would be the same as that for the Proposed Action.

<u>CHAPTER IV – ENVIRONMENTAL CONSEQUENCES</u>

This chapter describes the potential direct, indirect, residual, and/or cumulative impacts to resources that may result from the Proposed Action or Alternatives, as well as identifies the potential mitigation measures and monitoring needs associated with the specific resources.

PROPOSED ACTION

IV.A. Migratory Birds

The potential migratory birds listed in Table 3-3 could experience temporal impacts from the Proposed Action. Temporal impacts could be displacement or most likely avoidance of the area during construction. The limited wildlife habitat conditions in the PA for migratory birds means there would be no impact on migratory bird species in either the short or the long-term. Construction activities, if implemented and conducted during the breeding/nesting season (approximately May 15 through August 15), could impact nesting activities if any migratory bird species utilize the PA or adjacent areas during this period, although it would be short-term and temporary. Due to previous disturbance in the area it is highly likely that bird species already avoid using the area for foraging or reproductive processes.

IV.B. Water Quality (Surface/Ground)

The Proposed Action would have minimal to no impact on water quality. There are no perennial surface water bodies in a one-mile vicinity of the PA. There is only one downgradient well that is located in the PA. The PA is partially located within a watershed also. The Proposed Action includes a drainage and sediment control plan. This plan is to convey runoff from reclaimed areas and upstream, undisturbed areas through the project site in a manner that would protect the reclaimed areas and prevent degradation of downstream water quality. Adherence to appropriate Water Resources BMPs would minimize the potential impacts as well.

IV.C. General Wildlife

The Proposed Action would have little to no impact on the local wildlife because the actual PA is located in a previously disturbed area, and Red Rock Mill is a fenced off area. Although the amount of wildlife habitat loss would be negligible, any wildlife in the area would avoid the area during the construction period. They would be expected to return to the immediate areas soon after construction is completed.

IV.D. Recreation

The Proposed Action would have little to no impact on the Reno to Vegas Race. IMC would be aware of the dates of the Race and take appropriate actions to not impact the Race.

IV.E. Socioeconomics

Implementation of the Proposed Action would have minimal to no impact on socioeconomic values for the town of Mina or the surrounding area. Any impact would be positive to the local economy. The milling operations would potentially provide employment for up to six workers on-site. These individuals may be hired locally,

regionally, or nationally. The precise source location of employees is not possible to determine at this time. Individuals would commute and generally reside in local communities.

The Proposed Action would also likely employ local truck drivers and would benefit local businesses in Mina/Luning and Hawthorne for the life of the operations. Employees, contractors, and consultants would need food, lodging, fuel, and other supplies that would be purchased in the Mina/Luning area, resulting in positive indirect benefits over the life of the mine.

IV.F. Soils and Geology

The impacts to soils produced by the Proposed Action would be minimal due to the relatively small amount of new disturbance proposed. The PA has been extensively disturbed by previous milling activities. Implementation of the Proposed Action would create approximately 4.0 acres of surface disturbance. The majority of impacts to soil resources would be from the proposed tailing disposal area. Vehicle and foot traffic would contribute to some additional compaction during construction. Existing roads would be used to access target areas.

The whole PA soil map units fall within WEG 4 and 4L. These groups have medium susceptibility to wind erosion. No soils that are highly susceptible to erosion are located within the PA. BMPs would be used to minimize the effects of wind erosion.

Following successful reclamation, which would include the re-vegetation of disturbed areas, soil loss in the PA would be minimal.

IV.G. Special Status Species

Federally Listed Species

There would be no impact on Special Status Species due to previous disturbance in the PA and minimal habitat that exists in the area for these species.

BLM Sensitive Species

Given that this is a previously disturbed area, that the PA is fenced off, and surveys did not indicate the presence of any BLM Sensitive Species within the PA, there would be no impact on BLM Sensitive Species.

IV.H. Vegetation

There are relatively small amounts of existing vegetation within the PA due previous disturbance. No impacts to very minimal impacts are expected. Consultation with the FWS and the NNHP indicates there are no federally listed, proposed or candidate habitat communities or vegetation species on the project site (Appendix B).

An approved seed mix would be provided by the BLM to establish a plant community that would support the post-reclamation land use. The mix would be designed to provide species that can exist in west-central Nevada, are species for re-vegetation, and/or native species found in the plant communities prior to disturbance.

NO ACTION ALTERNATIVE

Under the No Action Alternative, Red Rock Mill would remain in the current condition of unsuccessful reclamation and no further resource impacts or environmental consequences would occur as detailed in Section III.

RESIDUAL IMPACTS

Once construction and rehabilitation are completed, no residual impacts are anticipated.

CUMULATIVE IMPACTS

All resources have been evaluated for cumulative impacts. The Project Area has been used as a milling facility since the early 1980's. The PA has been significantly disturbed since the opening of the original mill. Some potential solar projects and mining projects may occur in the surrounding area, but would not provide any cumulative affects. It has been determined that cumulative impacts would be negligible as a result of the Proposed Action or alternative.

MONITORING

The monitoring described in the Proposed Action is sufficient for this action.

CHAPTER V - CONSULTATION AND COORDINATION

LIST OF PREPARERS

Bureau of Land Management, Carson City Field Office

Terri Knutson – Stillwater Field Manager

Dave Schroeder - Project Lead

Desna Young – Planning and NEPA Coordinator

Terry Neumann – Hazmat Coordinator

John Axtell – Wild Horse (HMA) Specialist

Rita Suminsky – Wildlife Biologist

Susan McCabe – Archaeologist/Tribal Liaison

PERSONS, GROUPS, OR AGENCIES CONSULTED

Lumos & Associates

Larry Gorell, Environmental Manager Ralph Hogoboom, Project Manager Georgia Turner, Project Engineer Joana Feit, Biologist Cathy Wegman, Drafter

United States Fish and Wildlife Service

Nevada Natural Heritage Program

REFERENCES

- Bureau of Land Management (BLM), 2009. Carson City District NEPA Compliance Guidebook (Draft). Department of the Interior, Bureau of Land Management.
- Bureau of Land Management (BLM), 2008. *NEPA Handbook: H-1790-1* U.S. Department of Interior, Bureau of Land Management.
- Bureau of Land Management (BLM), 2003. Nevada BLM sensitive species on the Carson City District taken from:

<u>http://www.nv.blm.gov/wildlife/documents/sensitivespecies.pdf</u> Unpub. Doc. CCDO files.

Bureau of Land Management (BLM), 2004. California BLM sensitive species on the Carosn City district – Alpine Co, CA taken from:

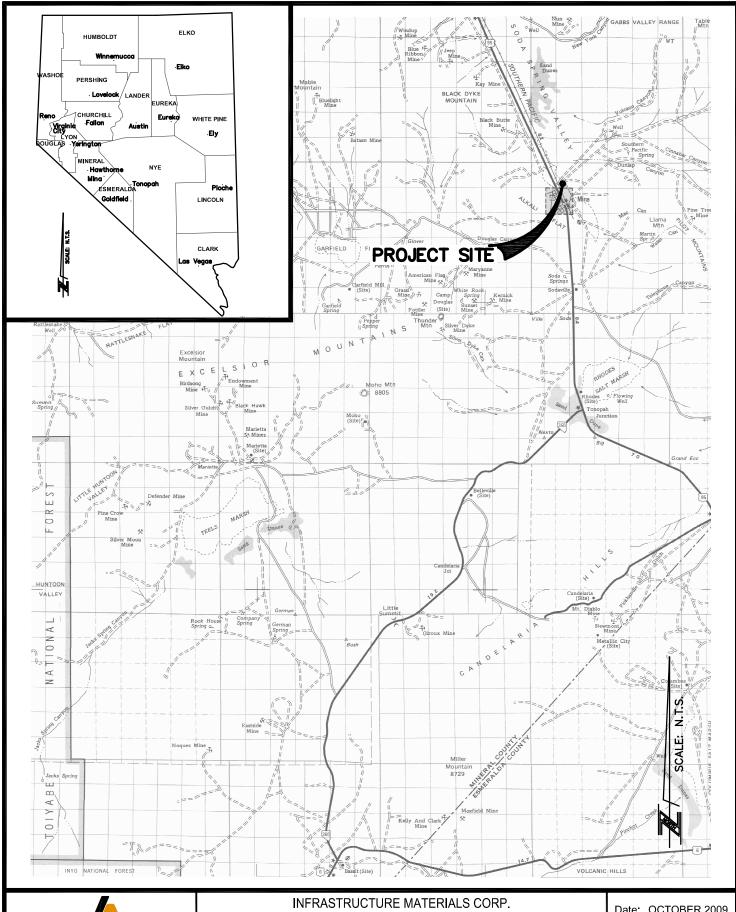
http://www.blm.gov/ca/pdfs/pa_biology_pdfs/SensitiveAnimals.pdf

http://www.blm.gov/ca/pdfs/pa_biology_pdfs/SensitivePlants.pdf Unpub. Doc. CCDO files.

- Bureau of Land Management (BLM) and Nevada State Historic Preservation Office (NVSHPS), Amended in 2005. State Protocol Agreement, Part VII. Identification, Evaluation and Treatment of Historic Properties, Subpart A., S.
- Bureau of Land Management (BLM), 2007. IM-2008-050 Migratory Bird Treaty Act Interim Guidance. Dated December 18, 2007. Unpub. Doc. CCFO files.

- Bureau of Land Management (BLM), 2008. BLM Manual 6840 Special status species management. Release Date 12/12/2008 under IM-20090039. U.S. Department of Interior, Bureau of Land Management, Washington D.C.
- Ferguson, H.G, Muller, S.W. and S.H. Cutheart. Geology of the Mina Quadrangle, Nevada, 1954.
- <u>Natural Resources Conservation Service</u> (NRCS), United States Department of Agriculture. 2006. http://www.nrcs.usda.gov/>.
- Nevada Division of Environmental Protection (NDEP), 1994. Handbook of Best Management Practices. Nevada Department of Conservation and Natural Resources, Division of Environmental Protection, Bureau of Water Quality Planning.
- Nevada Division of Water Resources (NDWR), Department of Conservation and Natural Resources. 2008. http://water.nv.gov/>.
- Nevada National Heritage Program (NNHP), 2008. Rare Plant Fact Sheet. Department of Conservation and Natural Resources.
- <u>Nevada Workforce Informer,</u> Nevada Department of Employment. 2008. http://www.nevadaworkforce.com/>
- Oldow, J.S. and Dockery, H.A. *Geologic Map of the Mina Quadrangle, Nevada*. Field Studies Map 6, Nevada Bureau of Mines and Geology, 1993.
- Stewart, John, H. <u>Geology of Nevada</u>. Nevada Bureau of Mines and Geology, Special Publication 4, 1980.
- Western Regional Climate Center. 2009. http://www.wrcc.dri.edu.

APPENDIX A



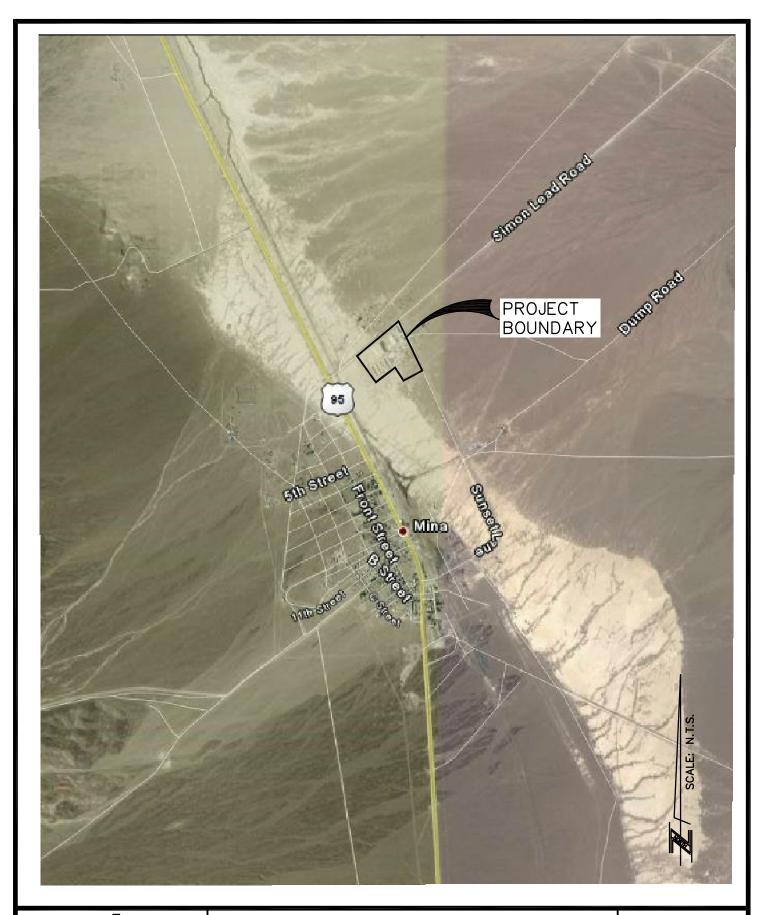


RED ROCK MILL VICINITY MAP

MINERAL COUNTY NEVADA

Date: OCTOBER 2009
Scale: NTS
Job No: 7218.000

FIGURE 1





INFRASTRUCTURE MATERIALS CORP.

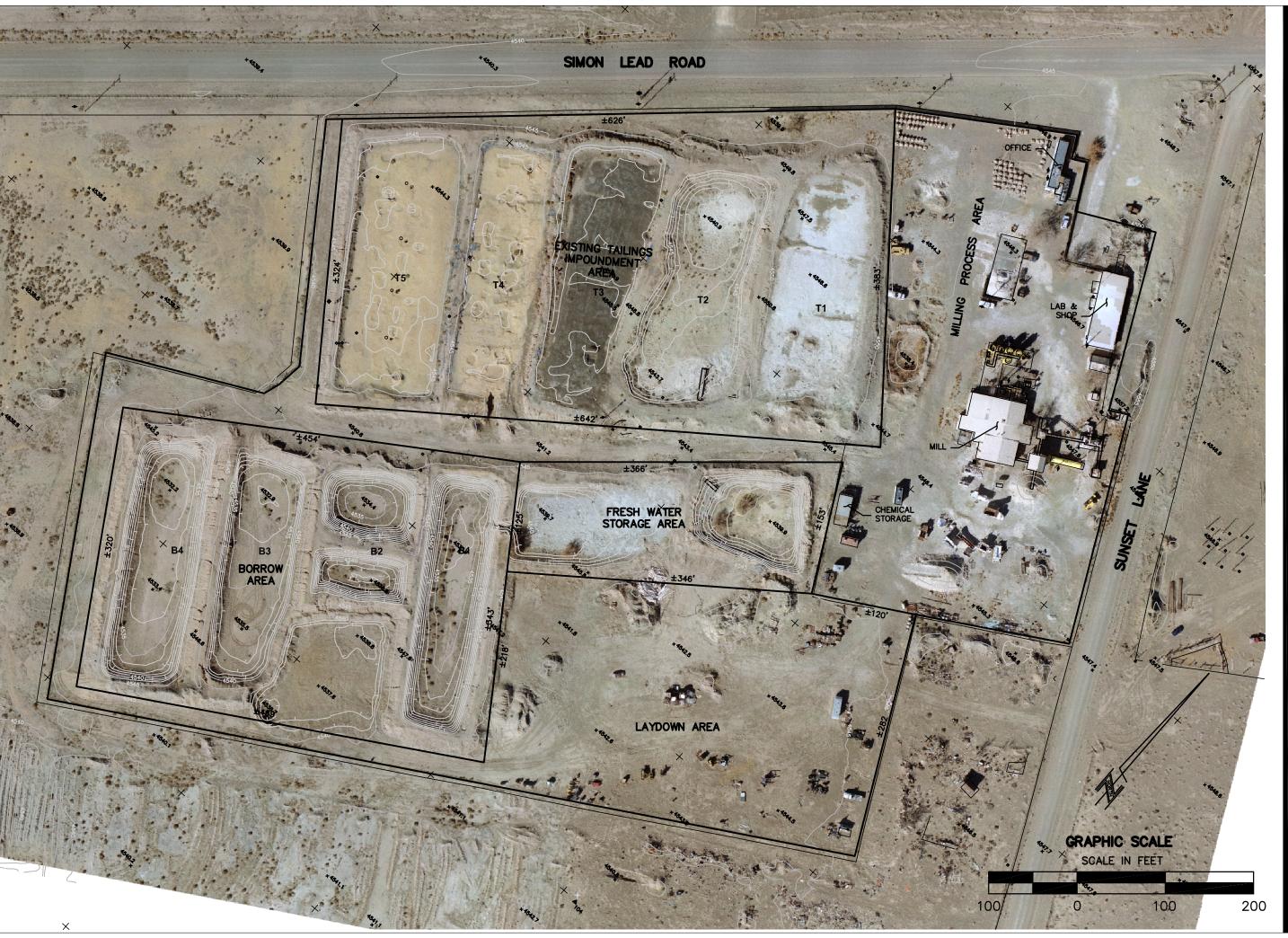
RED ROCK MILL BOUNDARY MAP

MINERAL COUNTY

Date: OCTOBER 2009

Scale: NTS
Job No: 7218,000
FIGURE 2

NEVADA





800 E. COLLEGE PARKWAY CARSON CITY, NEVADA 89706 TEL (775) 883-7077 FAX (775) 883-7114

WW.LUMOSENGINEERING.C

CIVIL ENGINEERING GEOTECHNICAL ENGINEERING PLANNING LANDSCAPE ARCHITECTURE SURVEYING / GIS CONSTRUCTION SERVICES MATERIALS TESTING

NEVADA

RED ROCK MILL EXISITING FACILITIES

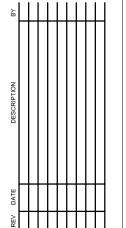
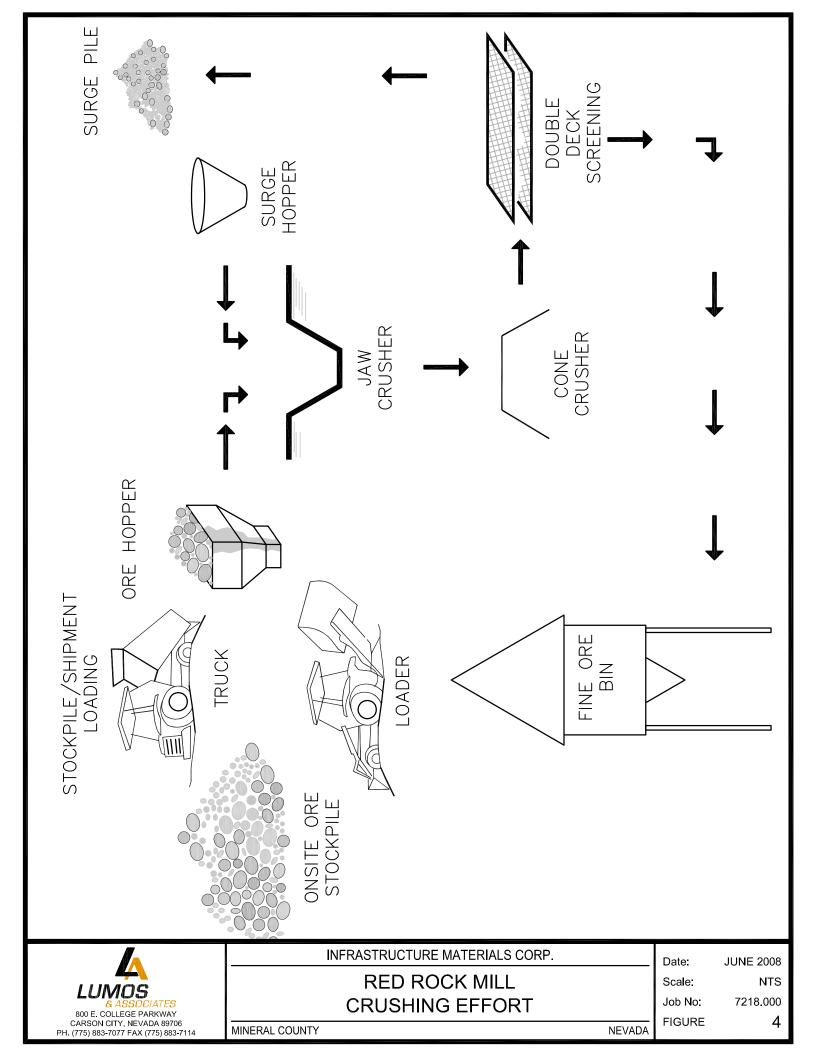
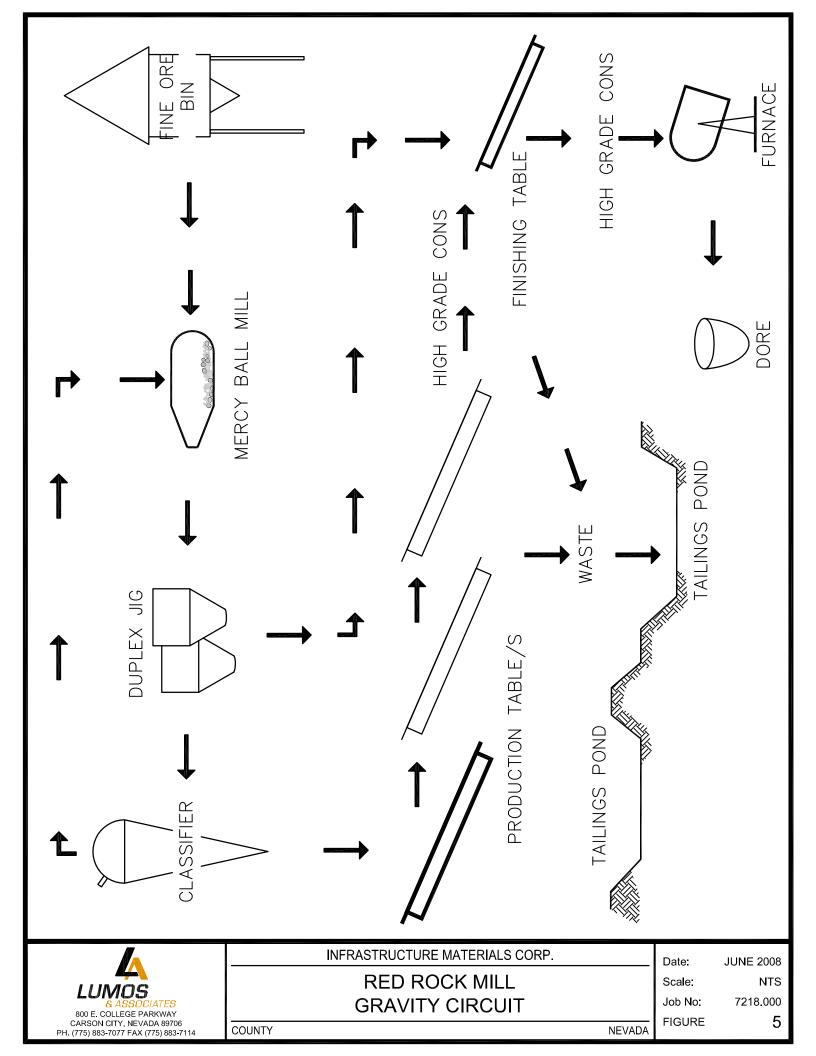
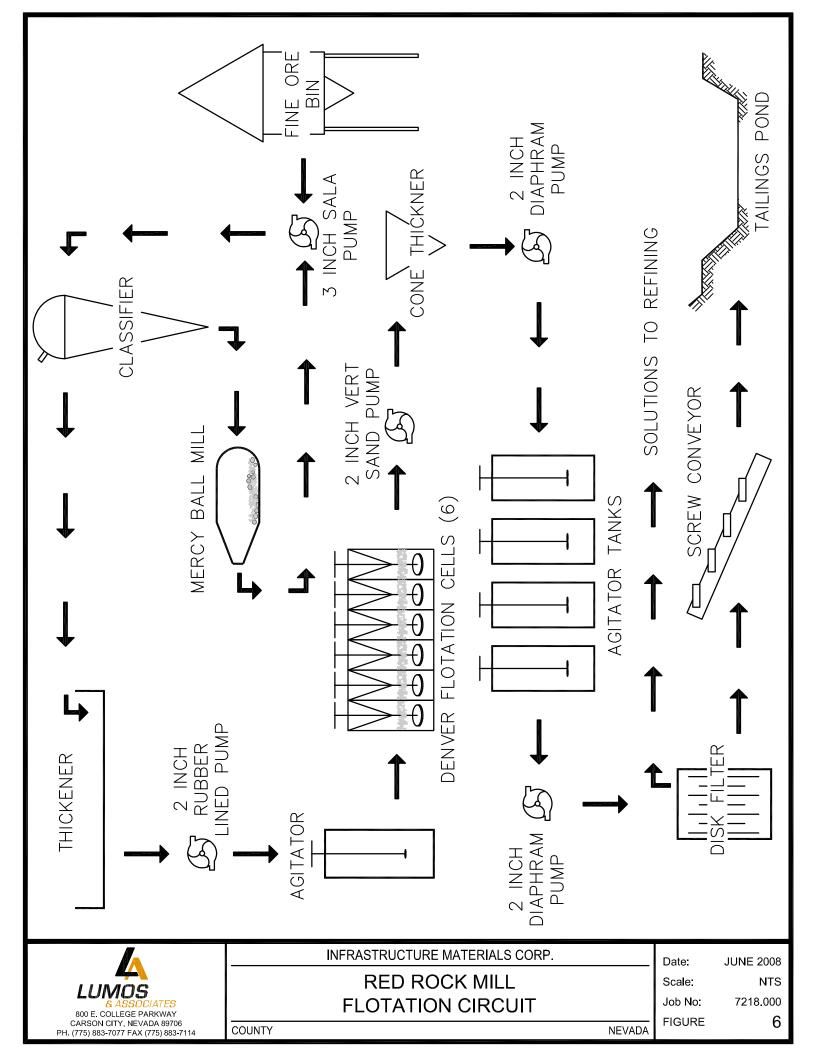


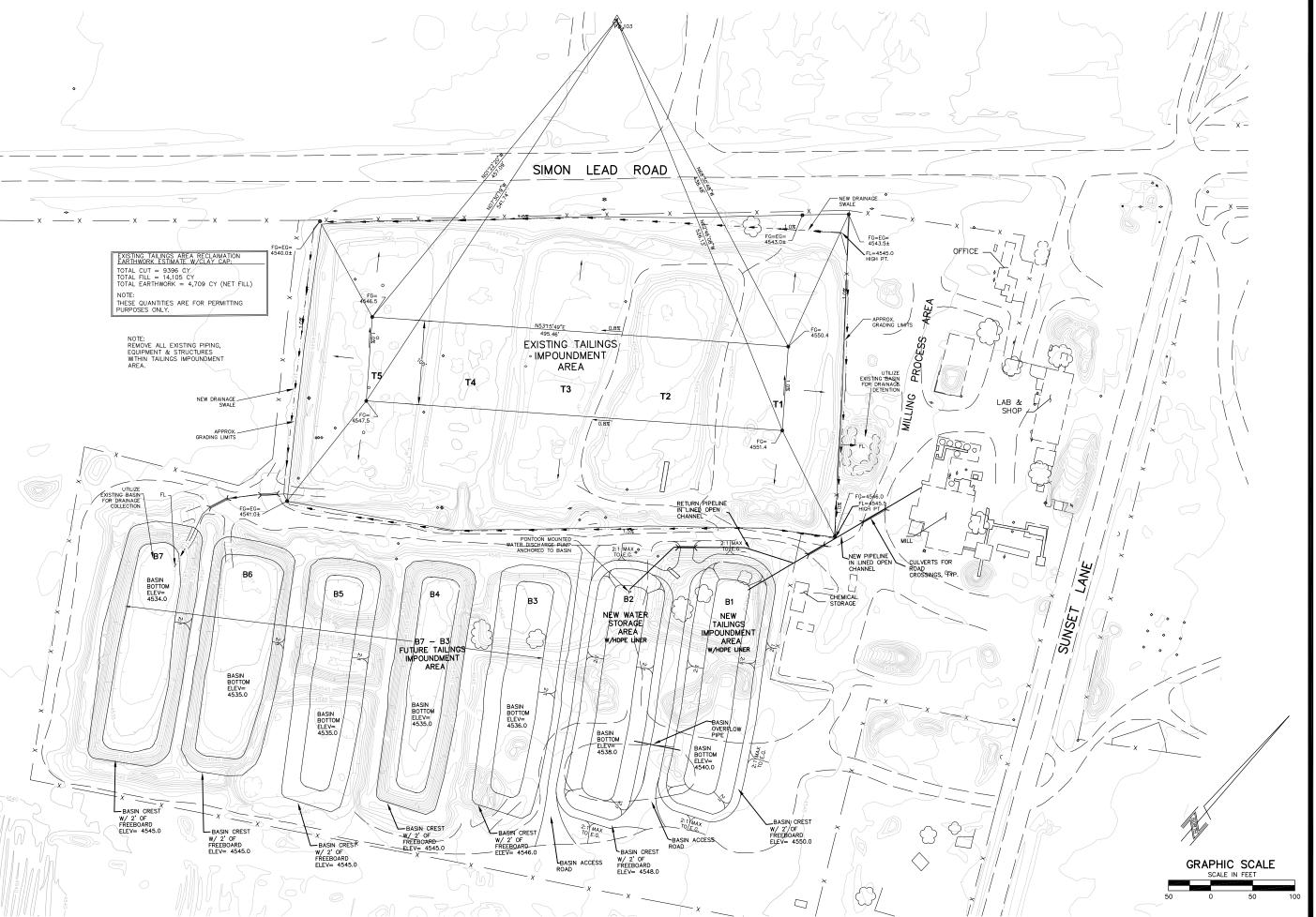
FIGURE 3

DATE: OCTOBER 2009
DRAWN BY: CW
DESIGNED BY: LG
CHECKED BY: LG
JOB NO.: 7218.000











225 KINGSBURY GRADE, SUITE A P.O. BOX 3570 STATELINE, NV 89449 TEL (775) 588-6490 FAX (775) 588-6479

CIVIL ENGINEERING GEOTECHNICAL ENGINEERING PLANNING LANDSCAPE ARCHITECTURE SURVEYING (GIS CONSTRUCTION SERVICES MATERIALS TESTING

RED ROCK MILL TAILINGS IMPOUNDMENT DESIGN & SITE PLAN

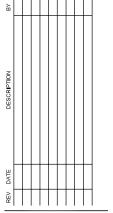
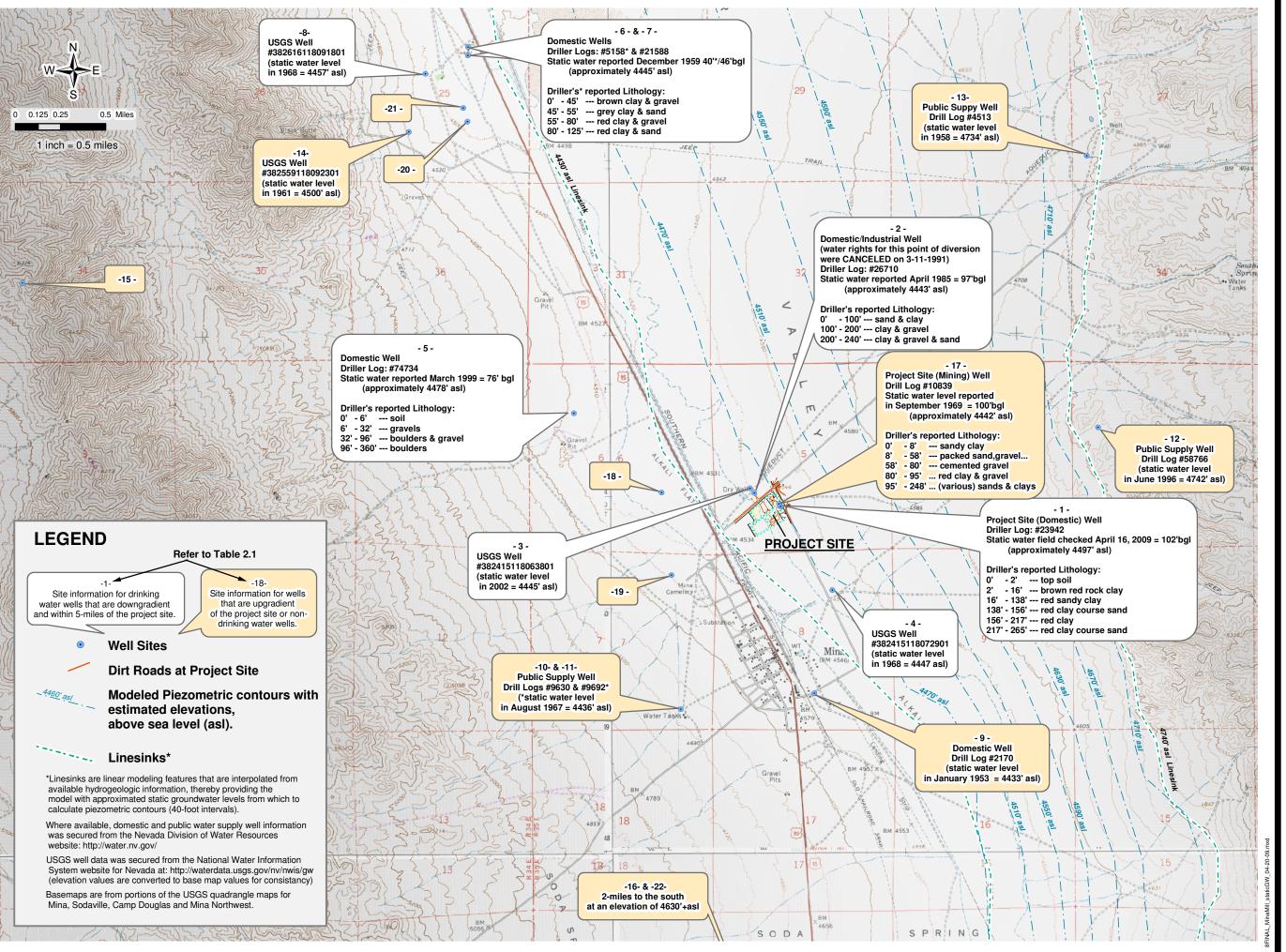


FIGURE 7

CW GT LG 7218.000 DRAWN BY: DESIGNED BY: CHECKED BY: JOB NO.:



LUMOS 8 ASSOCIATES

5401 LONGLEY LANE, SUITE 5 RENO, NEVADA 89511 TEL (775) 827-6111 FAX (775) 827-6122

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CIVIL ENGINEERING GEOTECHNICAL ENGINEERING PLANNING LANDSCAPE ARCHITECTURE SURVEYING / GIS CONSTRUCTION SERVICES MATERIALS TESTING

JCK MILL
Lithological Information-

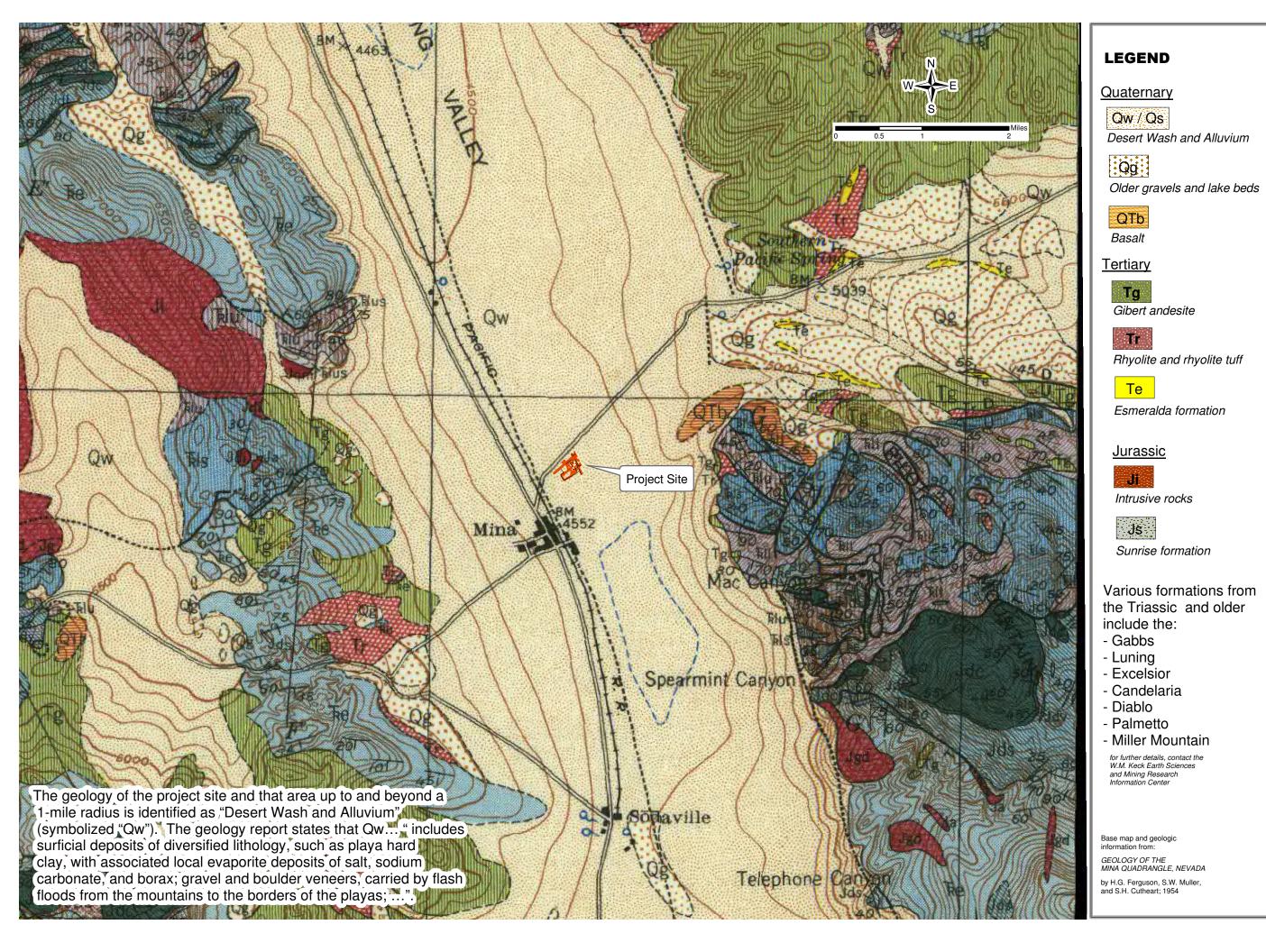
Materials C

RED ROCK

and

Figure 8

DATE: October 200
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DESIGNED BY: GT, JA
CHECKED BY: LG
JOB NO: 7218.000





5401 LONGLEY LANE, SUITE 5 RENO, NEVADA 89511 TEL (775) 827-6111 FAX (775) 827-6122

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LANDSCAPE ARCHITECTURE
SURVEYING / GIS
CONSTRUCTION SERVICES
MATERIALS TESTING

RED ROCK MI Geological Map-

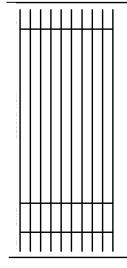


Figure 9

DRAWN BY: DESIGNED BY: CHECKED BY:

APPENDIX B

ALLEN BIAGGI Director

Department of Conservation and Natural Resources

JENNIFER E. NEWMARK Administrator



Nevada Natural Heritage Program Richard H. Bryan Building 901 S. Stewart Street, suite 5002 Carson City, Nevada 89701-5245 U.S.A.

> tel: (775) 684-2900 fax: (775) 684-2909



STATE OF NEVADA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Nevada Natural Heritage Program

http://heritage.nv.gov

27 January 2009

Joana Feit Lumos and Associates P.O. Box 3570 Stateline, NV 89449

RE: Data request received 26 January 2009

Dear Ms. Feit:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or At Risk plant and animal taxa recorded within or near the Red Rock Mill Project area. We searched our database and maps for the following, a two kilometer radius including:

Township 06N Range 35E Section 05

There are no at risk taxa recorded within the given area. However, habitat may be available for, the Sodaville milkvetch, *Astragalus lentiginosus* var. *sesquimentralis*, a Nevada Bureau of Land Management Special Status Species. We do not have complete data on various raptors that may also occur in the area; for more information contact Ralph Phenix, Nevada Department of Wildlife at (775) 688-1565. Note that all cacti, yuccas, and Christmas trees are protected by Nevada state law (NRS 527.060-.120), including taxa not tracked by this office.

Please note that our data are dependent on the research and observations of many individuals and organizations, and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,

Eric S. Miskow Biologist /Data Manager



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Nevada Fish and Wildlife Office 1340 Financial Blvd., Suite 234 Reno, Nevada 89502 Ph: (775) 861-6300 ~ Fax: (775) 861-6301

> February 3, 2009 File No. 2009-SL-0117

Ms. Joana Feit Lumos and Associates, Inc. Post Office Box 3570 Stateline, Nevada 89449

Dear Ms. Feit:

Subject: Species List Request for the Red Rock Mill Project, Mineral County, Nevada

This responds to your letter received on January 22, 2009, requesting a species list for the Red Rock Mill Project in Mineral County, Nevada. To the best of our knowledge, no listed, proposed, or candidate species occur in the subject project area. This response fulfills the requirements of the Fish and Wildlife Service (Service) to provide a list of species pursuant to section 7(c) of the Endangered Species Act of 1973 (Act), as amended, for projects that are authorized, funded, or carried out by a Federal agency.

The Nevada Fish and Wildlife Office no longer provides species of concern lists. Most of these species for which we have concern are also on the sensitive species list for Nevada maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we are adopting Heritage's sensitive species list and partnering with them to provide distribution data and information on the conservation needs for sensitive species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. Consideration of these sensitive species and exploring management alternatives early in the planning process can provide long-term conservation benefits and avoid future conflicts.

For a list of sensitive species by county, visit Heritage's website at www.heritage.nv.gov. For a specific list of sensitive species that may occur in the project area, you can obtain a data request form from the website or by contacting Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your



request is being obtained as part of your coordination with the Service under the Act. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address. Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (see http://www.leg.state.nv.us/NAC/NAC-503.html). Before a person can hunt, take, or possess any parts of wildlife species classified as protected, they must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (visit http://www.ndow.org or call 775-688-1500).

Because wetlands, springs, or streams may occur in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (Corps) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the Corps' Regulatory Section, 300 Booth Street, Room 2103, Reno, Nevada 89509, (775) 784-5304, regarding the possible need for a permit.

Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918 (MBTA), as amended (16 U.S.C. 703 *et seq.*), we are concerned about potential impacts the proposed project may have on migratory birds in the area. Given these concerns, we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Please reference File No. 2009-SL-0117 in future correspondence concerning this species list. If you have any questions regarding this correspondence or require additional information, please contact me or James Harter at (775) 861-6300.

Sincerely,

Robert D. Williams Field Supervisor

Marcy Harry